KWB9LE-63M/H Series Residual Current Circuit Breakers with Overcurrent Protection

Standard		IEC/EN 61009-1
Breaking capacity(kA)		6,10
Rated current(A),In		6,10,13,16,20,25,32,40,50,63
Number of poles		1P+N
Rated sensitivity currents(mA),IΔn		10,30,100,300
Tripping curve		B,C
Rated residual non-operating current		0.5XIΔn
Rated impulse withstand voltage Uimp(kV)		4
Rated voltage(V)		AC 230/240
Ambient temperature (°C)		-25~+40,Max.95%humidity
Residual current off time		≤0.1s
Type of trip	Ground fault	Electronic
	Over current	Thermal-magnetic
Electrical endurance		4000
Mechanical endurance		10000
Terminal capacity		16mm^2 flexible/25mm^2 rigid
Protection degree		IP20
Installation		35mm DIN rail
Certification		CE CB

KWB9LE-63M

KWB9LE-63H

KWB9LE–63M Residual Current Circuit Breakers with Overcurrent Protection

	Rated current(A)	$I_{\Delta n}$	Type AC		Type A		Packing unit
			B curve	C curve	B curve	C curve	
Type AC	6	10mA	KWB9LE-63M-B6/10	KWB9LE-63M-C6/10	KWB9LE-63M-B6/10-A	KWB9LE-63M-C6/10-A	6
	10		KWB9LE-63M-B10/10	KWB9LE-63M-C10/10	KWB9LE-63M-B10/10-A	KWB9LE-63M-C10/10-A	
	13		KWB9LE-63M-B13/10	KWB9LE-63M-C13/10	KWB9LE-63M-B13/10-A	KWB9LE-63M-C13/10-A	
	16		KWB9LE-63M-B16/10	KWB9LE-63M-C16/10	KWB9LE-63M-B16/10-A	KWB9LE-63M-C16/10-A	
	20		KWB9LE-63M-B20/10	KWB9LE-63M-C20/10	KWB9LE-63M-B20/10-A	KWB9LE-63M-C20/10-A	
	25		KWB9LE-63M-B25/10	KWB9LE-63M-C25/10	KWB9LE-63M-B25/10-A	KWB9LE-63M-C25/10-A	
	32		KWB9LE-63M-B32/10	KWB9LE-63M-C32/10	KWB9LE-63M-B32/10-A	KWB9LE-63M-C32/10-A	
	40		KWB9LE-63M-B40/10	KWB9LE-63M-C40/10	KWB9LE-63M-B40/10-A	KWB9LE-63M-C40/10-A	
	50		KWB9LE-63M-B50/10	KWB9LE-63M-C50/10	KWB9LE-63M-B50/10-A	KWB9LE-63M-C50/10-A	
	63		KWB9LE-63M-B63/10	KWB9LE-63M-C63/10	KWB9LE-63M-B63/10-A	KWB9LE-63M-C63/10-A	
	6	30mA	KWB9LE-63M-B6/30	KWB9LE-63M-C6/30	KWB9LE-63M-B6/30-A	KWB9LE-63M-C6/30-A	
	10		KWB9LE-63M-B10/30	KWB9LE-63M-C10/30	KWB9LE-63M-B10/30-A	KWB9LE-63M-C10/30-A	
	13		KWB9LE-63M-B13/30	KWB9LE-63M-C13/30	KWB9LE-63M-B13/30-A	KWB9LE-63M-C13/30-A	
	16		KWB9LE-63M-B16/30	KWB9LE-63M-C16/30	KWB9LE-63M-B16/30-A	KWB9LE-63M-C16/30-A	
	20		KWB9LE-63M-B20/30	KWB9LE-63M-C20/30	KWB9LE-63M-B20/30-A	KWB9LE-63M-C20/30-A	
	25		KWB9LE-63M-B25/30	KWB9LE-63M-C25/30	KWB9LE-63M-B25/30-A	KWB9LE-63M-C25/30-A	
	32		KWB9LE-63M-B32/30	KWB9LE-63M-C32/30	KWB9LE-63M-B32/30-A	KWB9LE-63M-C32/30-A	
	40		KWB9LE-63M-B40/30	KWB9LE-63M-C40/30	KWB9LE-63M-B40/30-A	KWB9LE-63M-C40/30-A	
	50		KWB9LE-63M-B50/30	KWB9LE-63M-C50/30	KWB9LE-63M-B50/30-A	KWB9LE-63M-C50/30-A	
	63		KWB9LE-63M-B63/30	KWB9LE-63M-C63/30	KWB9LE-63M-B63/30-A	KWB9LE-63M-C63/30-A	
Type A	6	100mA	KWB9LE-63M-B6/100	KWB9LE-63M-C6/100	KWB9LE-63M-B6/100-A	KWB9LE-63M-C6/100-A	
	10		KWB9LE-63M-B10/100	KWB9LE-63M-C10/100	KWB9LE-63M-B10/100-A	KWB9LE-63M-C10/100-A	
	13		KWB9LE-63M-B13/100	KWB9LE-63M-C13/100	KWB9LE-63M-B13/100-A	KWB9LE-63M-C13/100-A	
	16		KWB9LE-63M-B16/100	KWB9LE-63M-C16/100	KWB9LE-63M-B16/100-A	KWB9LE-63M-C16/100-A	
	20		KWB9LE-63M-B20/100	KWB9LE-63M-C20/100	KWB9LE-63M-B20/100-A	KWB9LE-63M-C20/100-A	
	25		KWB9LE-63M-B25/100	KWB9LE-63M-C25/100	KWB9LE-63M-B25/100-A	KWB9LE-63M-C25/100-A	
	32		KWB9LE-63M-B32/100	KWB9LE-63M-C32/100	KWB9LE-63M-B32/100-A	KWB9LE-63M-C32/100-A	
	40		KWB9LE-63M-B40/100	KWB9LE-63M-C40/100	KWB9LE-63M-B40/100-A	KWB9LE-63M-C40/100-A	
	50		KWB9LE-63M-B50/100	KWB9LE-63M-C50/100	KWB9LE-63M-B50/100-A	KWB9LE-63M-C50/100-A	
	63		KWB9LE-63M-B63/100	KWB9LE-63M-C63/100	KWB9LE-63M-B63/100-A	KWB9LE-63M-C63/100-A	
	6	300mA	KWB9LE-63M-B6/300	KWB9LE-63M-C6/300	KWB9LE-63M-B6/300-A	KWB9LE-63M-C6/300-A	
	10		KWB9LE-63M-B10/300	KWB9LE-63M-C10/300	KWB9LE-63M-B10/300-A	KWB9LE-63M-C10/300-A	
	13		KWB9LE-63M-B13/300	KWB9LE-63M-C13/300	KWB9LE-63M-B13/300-A	KWB9LE-63M-C13/300-A	
	16		KWB9LE-63M-B16/300	KWB9LE-63M-C16/300	KWB9LE-63M-B16/300-A	KWB9LE-63M-C16/300-A	
	20		KWB9LE-63M-B20/300	KWB9LE-63M-C20/300	KWB9LE-63M-B20/300-A	KWB9LE-63M-C20/300-A	
	25		KWB9LE-63M-B25/300	KWB9LE-63M-C25/300	KWB9LE-63M-B25/300-A	KWB9LE-63M-C25/300-A	
	32		KWB9LE-63M-B32/300	KWB9LE-63M-C32/300	KWB9LE-63M-B32/300-A	KWB9LE-63M-C32/300-A	
	40		KWB9LE-63M-B40/300	KWB9LE-63M-C40/300	KWB9LE-63M-B40/300-A	KWB9LE-63M-C40/300-A	
	50		KWB9LE-63M-B50/300	KWB9LE-63M-C50/300	KWB9LE-63M-B50/300-A	KWB9LE-63M-C50/300-A	
	63		KWB9LE-63M-B63/300	KWB9LE-63M-C63/300	KWB9LE-63M-B63/300-A	KWB9LE-63M-C63/300-A	

KWB9LE–63H Residual Current Circuit Breakers with Overcurrent Protection

	Rated current(A)	$I_{\Delta n}$	Type AC		Type A		Packing unit
			B curve	C curve	B curve	C curve	
	6	10mA	KWB9LE-63H-B6/10	KWB9LE-63H-C6/10	KWB9LE-63H-B6/10-A	KWB9LE-63H-C6/10-A	6
	10		KWB9LE-63H-B10/10	KWB9LE-63H-C10/10	KWB9LE-63H-B10/10-A	KWB9LE-63H-C10/10-A	
	13		KWB9LE-63H-B13/10	KWB9LE-63H-C13/10	KWB9LE-63H-B13/10-A	KWB9LE-63H-C13/10-A	
	16		KWB9LE-63H-B16/10	KWB9LE-63H-C16/10	KWB9LE-63H-B16/10-A	KWB9LE-63H-C16/10-A	
	20		KWB9LE-63H-B20/10	KWB9LE-63H-C20/10	KWB9LE-63H-B20/10-A	KWB9LE-63H-C20/10-A	
	25		KWB9LE-63H-B25/10	KWB9LE-63H-C25/10	KWB9LE-63H-B25/10-A	KWB9LE-63H-C25/10-A	
	32		KWB9LE-63H-B32/10	KWB9LE-63H-C32/10	KWB9LE-63H-B32/10-A	KWB9LE-63H-C32/10-A	
	40		KWB9LE-63H-B40/10	KWB9LE-63H-C40/10	KWB9LE-63H-B40/10-A	KWB9LE-63H-C40/10-A	
	50		KWB9LE-63H-B50/10	KWB9LE-63H-C50/10	KWB9LE-63H-B50/10-A	KWB9LE-63H-C50/10-A	
	63		KWB9LE-63H-B63/10	KWB9LE-63H-C63/10	KWB9LE-63H-B63/10-A	KWB9LE-63H-C63/10-A	
	6	30mA	KWB9LE-63H-B6/30	KWB9LE-63H-C6/30	KWB9LE-63H-B6/30-A	KWB9LE-63H-C6/30-A	
	10		KWB9LE-63H-B10/30	KWB9LE-63H-C10/30	KWB9LE-63H-B10/30-A	KWB9LE-63H-C10/30-A	
	13		KWB9LE-63H-B13/30	KWB9LE-63H-C13/30	KWB9LE-63H-B13/30-A	KWB9LE-63H-C13/30-A	
	16		KWB9LE-63H-B16/30	KWB9LE-63H-C16/30	KWB9LE-63H-B16/30-A	KWB9LE-63H-C16/30-A	
	20		KWB9LE-63H-B20/30	KWB9LE-63H-C20/30	KWB9LE-63H-B20/30-A	KWB9LE-63H-C20/30-A	
	25		KWB9LE-63H-B25/30	KWB9LE-63H-C25/30	KWB9LE-63H-B25/30-A	KWB9LE-63H-C25/30-A	
	32		KWB9LE-63H-B32/30	KWB9LE-63H-C32/30	KWB9LE-63H-B32/30-A	KWB9LE-63H-C32/30-A	
	40		KWB9LE-63H-B40/30	KWB9LE-63H-C40/30	KWB9LE-63H-B40/30-A	KWB9LE-63H-C40/30-A	
	50		KWB9LE-63H-B50/30	KWB9LE-63H-C50/30	KWB9LE-63H-B50/30-A	KWB9LE-63H-C50/30-A	
	63		KWB9LE-63H-B63/30	KWB9LE-63H-C63/30	KWB9LE-63H-B63/30-A	KWB9LE-63H-C63/30-A	
	6	100mA	KWB9LE-63H-B6/100	KWB9LE-63H-C6/100	KWB9LE-63H-B6/100-A	KWB9LE-63H-C6/100-A	
	10		KWB9LE-63H-B10/100	KWB9LE-63H-C10/100	KWB9LE-63H-B10/100-A	KWB9LE-63H-C10/100-A	
	13		KWB9LE-63H-B13/100	KWB9LE-63H-C13/100	KWB9LE-63H-B13/100-A	KWB9LE-63H-C13/100-A	
	16		KWB9LE-63H-B16/100	KWB9LE-63H-C16/100	KWB9LE-63H-B16/100-A	KWB9LE-63H-C16/100-A	
	20		KWB9LE-63H-B20/100	KWB9LE-63H-C20/100	KWB9LE-63H-B20/100-A	KWB9LE-63H-C20/100-A	
	25		KWB9LE-63H-B25/100	KWB9LE-63H-C25/100	KWB9LE-63H-B25/100-A	KWB9LE-63H-C25/100-A	
	32		KWB9LE-63H-B32/100	KWB9LE-63H-C32/100	KWB9LE-63H-B32/100-A	KWB9LE-63H-C32/100-A	
	40		KWB9LE-63H-B40/100	KWB9LE-63H-C40/100	KWB9LE-63H-B40/100-A	KWB9LE-63H-C40/100-A	
	50		KWB9LE-63H-B50/100	KWB9LE-63H-C50/100	KWB9LE-63H-B50/100-A	KWB9LE-63H-C50/100-A	
	63		KWB9LE-63H-B63/100	KWB9LE-63H-C63/100	KWB9LE-63H-B63/100-A	KWB9LE-63H-C63/100-A	
	6	300mA	KWB9LE-63H-B6/300	KWB9LE-63H-C6/300	KWB9LE-63H-B6/300-A	KWB9LE-63H-C6/300-A	
	10		KWB9LE-63H-B10/300	KWB9LE-63H-C10/300	KWB9LE-63H-B10/300-A	KWB9LE-63H-C10/300-A	
	13		KWB9LE-63H-B13/300	KWB9LE-63H-C13/300	KWB9LE-63H-B13/300-A	KWB9LE-63H-C13/300-A	
	16		KWB9LE-63H-B16/300	KWB9LE-63H-C16/300	KWB9LE-63H-B16/300-A	KWB9LE-63H-C16/300-A	
	20		KWB9LE-63H-B20/300	KWB9LE-63H-C20/300	KWB9LE-63H-B20/300-A	KWB9LE-63H-C20/300-A	
	25		KWB9LE-63H-B25/300	KWB9LE-63H-C25/300	KWB9LE-63H-B25/300-A	KWB9LE-63H-C25/300-A	
	32		KWB9LE-63H-B32/300	KWB9LE-63H-C32/300	KWB9LE-63H-B32/300-A	KWB9LE-63H-C32/300-A	
	40		KWB9LE-63H-B40/300	KWB9LE-63H-C40/300	KWB9LE-63H-B40/300-A	KWB9LE-63H-C40/300-A	
	50		KWB9LE-63H-B50/300	KWB9LE-63H-C50/300	KWB9LE-63H-B50/300-A	KWB9LE-63H-C50/300-A	
	63		KWB9LE-63H-B63/300	KWB9LE-63H-C63/300	KWB9LE-63H-B63/300-A	KWB9LE-63H-C63/300-A	

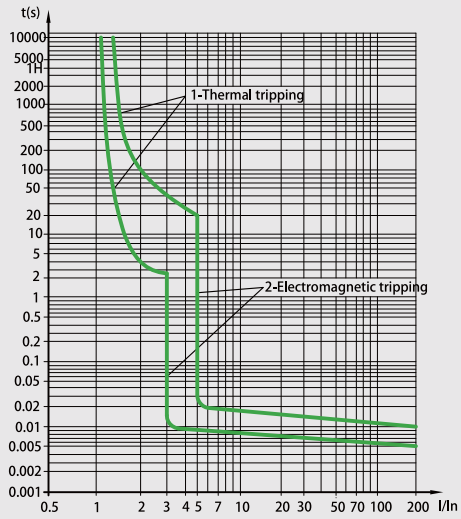
Type AC

Type A

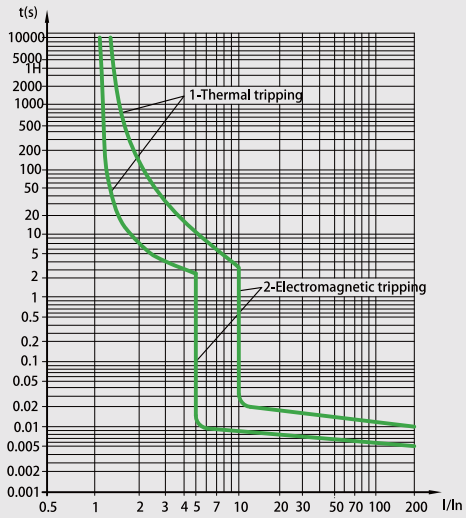
KWB9LE-63M/H Series Residual Current Circuit Breakers with Overcurrent Protection

Curves

B type



C type



Breaking time of residual current

Max.breaking time					
In(A)	I∆n(A)	I∆n	2 I∆n	5 I∆n	5-500A
6-63	0.01,0.03,0.1,0.3	0.1s	0.08s	0.04s	0.04s

Wiring (The suitable conductors should be used for connection,see table below for relative parameters)

Rated current In (A)	Cross section area s(mm^2)	Tightening torque(N.m)
6	1	2.0
10	1.5	
13	1.5	
16-20	2.5	
25	4	
32	6	
40-50	10	
63	16	

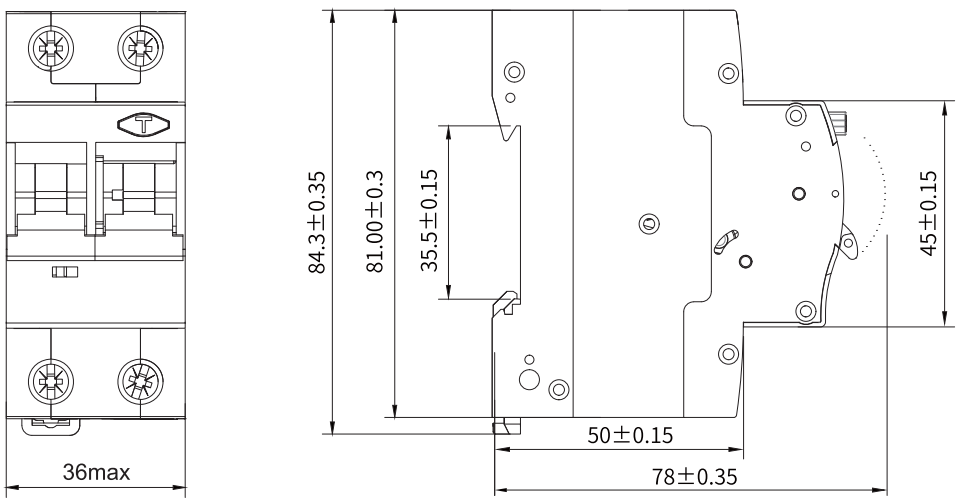
Types

The RCBOs are devided into types depending on the operating function:
Type AC ⏦: For which tripping is ensured for residual sinusoidal alternating currents, whether suddenly applied or slowly rising.
Type A ⏦: For which tripping is ensued for residual sinusoidal alternating currents and residual pulsating direct currents, whether suddenly applied or slowly rising.

Tripping sensitivity data

RCBO with a rated residual current of maximum 30mA are used for personnel,material and fire protection, as well as for protection against direct contact.
RCBO with a rated residual current of maximum 300mA are used as preventative fire protection in case of insulation faults.
RCBO with a rated residual current of 100mA co-ordinated with the earth system according to the formula I∆n<50/R, to provide protection again indirect contacts.

Overall and mounting dimensions



KWB9LE-63M/H